

New Claim:

16. (New) A process for the production of carbohydrates from biomass that does not contain lignin by the process consisting of mixing, heating and reacting by the following steps:

- (1) biomass is ground into small particles;
- (2) aqueous sodium hydroxide is added to and mixed with the biomass;
- (3) biomass is heated to about 140 degrees C to remove excess water;
- (4) biomass is heated to 140 to 200 degree C until the biomass become a thick paste;
- (5) water is added and mixed to form an aqueous solution, then filtered to remove non-soluble materials;
- (6) carbon dioxide is added and mixed with the aqueous solution to react the sodium hydroxide to form sodium carbonate;
- (6) the aqueous solution is concentrated by evaporating off water then the carbohydrates form crystals and the aqueous solution is filtered or decanted off thereby recovering the carbohydrates;
- (7) lime oxide is added and reacted with the aqueous solution of sodium carbonate to form sodium hydroxide and calcium carbonate which precipitates, and the aqueous sodium hydroxide is decanted off to be reused;
- (8) calcium carbonate is heated in a lime kiln to recover calcium oxide for reuse and the carbon dioxide is collected for reuse.